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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,302	06/30/2000	Gregory Michael Wilson	MEMC-98-4650(2293)	9819
321	7590	01/14/2004	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL			KUNEMUND, ROBERT M	
ONE METROPOLITAN SQUARE			ART UNIT	PAPER NUMBER
16TH FLOOR			1765	
ST LOUIS, MO 63102				

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/608,302	<b>Applicant(s)</b> WILSON ET AL. <i>eb</i>
	<b>Examiner</b> Robert M Kunemund	<b>Art Unit</b> 1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
**THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 23 October 2003.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-3,9,12 and 15-17 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,9,12 and 15-17 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) The translation of the foreign language provisional application has been received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) Notice of References Cited (PTO-892)                  4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)        5) Notice of Informal Patent Application (PTO-152)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.        6) Other: \_\_\_\_\_

### DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 to 3, 9, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falster (PCT 38675) et al or Huber et al both in view of Aswad (WO 99/03138)

The Falster et al and Huber et al references teach a method and apparatus for denuding a silicon wafer. A silicon wafer is placed in a heating chamber and heated to temperatures above 1175° c. The wafer is then cooled to temperatures below 800 °c at cooling rates, which can vary and are 10°c/sec or higher, note Falster pages 14-15, Huber et al entire reference. The sole difference between the instant claims and the prior art is the removal of the heated wafer to another chamber. However, the Aswad

reference teaches moving heated wafer from one chamber to another via a Bernoulli wand, note entire reference. It would have been obvious to one of ordinary skill in the art to modify the Falster et al and Huber et al references by the teachings of the Goodwin et al reference to transfer the heated wafer in order to place the wafer in a cooling only chamber increasing control over the wafer.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falster (PCT 38675) et al or Huber et al both in view of Aswad.

The Falster et al, Huber et al and Aswad references are relied on for the same reasons as stated, *supra*, and differ from the instant claims in the heat source. However, in the absence of unobvious results, it would have been obvious to one of ordinary skill in the art to determine through routine experimentations the optimum, operable heating means in the Falster et al and Huber et al references in order to uniformly heat the wafer creating uniform properties.

*Response to Applicants' Arguments*

Applicant's arguments filed October 23, 2003 have been fully considered but they are not persuasive.

Applicant's argument concerning the Aswad reference has been considered and not deemed pervasive. The reference does in fact teach the removal from a hot zone of a wafer to a cooling area by the use of a bernoulli wand. In view of applicants own teaches the mere operation of the wand inherently cools the wafer by the use of the

gases. Thus, the Aswad reference inherently cools the wafer as instantly claimed. Further, the reference is not limited in scope to a mere example. There is no teaching in the specification that states, one does not use the wand for temperatures higher than 900° c.

Applicants' argument concerning the combination of references is noted. However, it is obvious to one of ordinary skill in the art to remove the wafer to cool in order to increase the speed of the wafer treatments by not having to cool and heat the heating chamber for every wafer, thus speeding up times.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Kunemund whose telephone number is 703-308-1091. The examiner can normally be reached on 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 703-305-2667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

RMK



ROBERT KUNEMUND  
PRIMARY EXAMINER